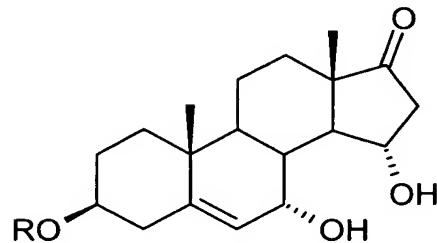


We Claim:

1. A process for the production of steroid compounds of Formula II

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**Formula II**

wherein R is:

-H or -CO-R1;

10 wherein R1 is C1-C5 alkyl;

by fungal dihydroxylation of steroid compounds of Formula I

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**Formula I**

comprising contacting a steroid of Formula I with a biotransformation culture containing a species of the genus *Fusarium* capable of 7 $\alpha$ ,15 $\alpha$ -dihydroxylation.

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2. A process for producing steroids of Formula II according to Claim 1 wherein

the 7 $\alpha$ ,15 $\alpha$ -dihydroxylation is achieved with the strain *Fusarium culmorum* UC

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25 3. A process for producing steroids of Formula II according to Claim 2 further comprising the steps of:

a) preparing a primary seed culture of *Fusarium*;

- b) preparing a secondary seed culture using the culture of step a);
- c) preparing a tertiary culture for biotransformation using the culture of step b);
- d) adding a steroid of Formula I to the culture of step c);
- 5 e) collecting the solids from the culture of step d); and
- f) extracting the solids of step d);

4. A process for producing steroids of Formula II according to Claim 1 wherein the biotransformation culture contains a surfactant.

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5. A process for producing steroids of Formula II according to Claim 4 wherein the surfactant is a non-ionic detergent selected from the group consisting of non-ionic amides, non-ionic esters such as ethoxylated alkyl phenols, polyethylene sorbitan esters, emulsifying waxes, non-ionic ethoxylates, tristyrylphenol ethoxylates, alcohol 15 ethoxylates, ethoxylated mercaptans, capped ethoxylates, block copolymers, and reverse copolymers.

6. A process for producing steroids of Formula II according to Claim 5 wherein the surfactant is an ethoxylated alkyl phenol.

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7. A process for producing steroids of Formula II according to Claim 6 wherein the ethoxylated alkyl phenol is octylphenoxyethoxyethanol.

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8. A process for producing steroids of Formula II according to Claim 6 wherein the ethoxylated alkyl phenol is nonylphenoxyethoxyethanol.

9. A process for producing steroids of Formula II according to Claim 1 wherein the biotransformation culture contains a natural oil.

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10. A process for producing steroids of Formula II according to Claim 9 wherein the natural oil is selected from the group consisting of caster oil, corn oil, cottonseed oil, lard oil, linseed oil, olive oil, peanut oil, rapeseed oil, safflower seed oil, soybean oil, sunflower seed oil, and wheat germ oil.

11. A process for producing steroids of Formula II according to Claim 10 wherein the natural oil is soybean oil.